KANSAS MEDICAL JOURNAL.

VOL. VII. TOPEKA, KANSAS, SATURDAY, FEBRUARY 9, 1895. No. 6.

MISCELLANEY.

Some Surgical Cases and a Post Mortem.

BY DR. L. REYNOLDS, HORTON, KAS.

Read before the Eastern Kansas Medical Society, Topeka, January 8, 1895.

It is not my intention to indulge in a long drawn out clinical statement, but to make a very brief report of some cases in general practice, hoping that some part of it may elicit an interesting and instructive discussion.

1. Laryngeal obstruction with loss of voice:

The first case to which I wish to call your attention was that of a boy 11 months old who had been unable to cry except by facial expression since he was six months old.

He suffered constantly from dyspnœa, which was greatly aggravated and threatened his life whenever he contracted a cold. Was unable to nurse except at short intermissions, alternating this function with breathing.

During May of last year I made a preliminary tracheotomy, which greatly relieved him, and his general condition rapidly improved. Five days later I opened the larynx, but was unable to find any cavity or opening until a probe passed up through the tracheal opening indicated the former course of what air the child could inhale, and the channel was opened on the probe. Loose folds of mucous membrane whose surfaces were in constant contact, except when forced apart, constituted the obstruction.

I dilated upward and downward from the laryngeal wound. The tracheal opening soon closed and the breathing capacity of the larynx was improved. The child lived twenty-eight days and died suddenly and without apparent indication of approaching death.

2. October 21, 1893—Strangulated left inguinal hernia of sixty hours' duration:

This patient was a man about 57 years of age. He came to me after thirty hours of strangulation. Careful taxis, both without and with an anæsthetic, failed of reduction. He could not be induced to allow an operation till several physicians had tried taxis and both he and his wife had thoroughly triturated the gut. Found the apex of hernia after surface tissues were divided to be very dark, but sufficient vitality remained for restoration. No bad symptoms followed and he made an early recovery.

3. January 14, 1894—Strangulated right inguinal hernia of twenty-four hours' duration:

A lady aged 25, confined eighteen days previously, suffered from strangulation of an old hernia. The usual means having failed, operation was resorted to and an effort at radical cure made without excision of the sac. A rapid recovery followed.

4. Cirrhotic ovaries with salpingitis:

Patient aged 36; mother of four children, the youngest about 12 years old. Had had one abortion, and was more or less an invalid for twelve years. Painful and prolonged menstruation sometimes confined her to bed. This occurred about every two or three weeks. Operation October 26, 1893, showed uterus somewhat atrophied. Left tube approximately normal, with the ovary condensed to about one-third its normal size. Right tube was very much thickened, tortuous and saculated, with ovary less shrunken than the left. Both ovaries were adhered

to the posterior surface of uterine fundus. Some well organized bands bound the left broad ligament to the sigmoid flexure of the rectum. One of these gave way during the excision of left ovary and tube, causing considerable hemorrhage, and necessitated a purse string suture to the peritoneal coat of the flexure. Severe and prolonged nausea was followed by a tedious convalescence.

5. Interstitial ovaritis and salpingitis:

Lady aged 22; unmarried; had suffered seven years from severe dysmenorrhœa on left side. Had had various trials of all remedies that seemed indicated, as she went from one physician to another without any benefit.

Examination showed left ovary dislocated and enlarged. Operation July 12 last showed the left tube twice its normal length, tortuous and very much thickened. The ovary was two to three times its natural size and very dense.

Right tube was somewhat enlarged and elongated, but it was thought best not to remove it.

She writes me about five months later that she has been gradually improving; has gained in general strength and weight. Her menstrual function goes on as before, but a good deal less painful. Her pain now, as formerly, is confined to the left side, but is growing less. It is probable that this persistence of pain after removal of the part is on the same principle as pain in an amputated limb.

6. Jan. 30, 1894—Strangulated left inguinal hernia of twelve to fifteen hours' duration:

This patient was a man aged about sixty who welcomed surgical interference for the relief of his great suffering. It was an old hernia with which he had grown careless. Found the sac considerably thickened and very vascular. Opened the sac, reduced the gut, and after ligaturing the base of sac excised it.

All of these cases of hernia were advised to wear a truss for a few weeks at least, but all of them ignored the advice. A partial return of the hernia has occurred in the case first reported. The other two have shown no indication of return.

7. February 21, 1894—Ruptured tubal pregnancy:

Mrs. S., aged 25; had borne two children; youngest 5 years old; had a miscarriage two years ago.

Subsequent to the birth of second child she had dysmenorrhœal pain on right side. She had been ill about six weeks before the operation. Had required the attendance of a physician for two weeks, during which time she had to be kept under the influence of morphine and atropine hypodermically. As the history of the illness was indefinite, the fluctuating tumor found in and above the pelvis was thought to be pus beneath the broad ligament, although tubal pregnancy was suspected. The vaginal cul de sac was obliterated and the apex of the tumor extended nearly to the umbilicus.

Operation showed the broad ligament dissected up and adhered to the abdominal wall anteriorly, as well as to the omentum and neighboring viscera. While separating adhesions the sac ruptured in the median line where I had scratched it with the scalpel while opening the abdomen.

Several pints of dark, coagulated blood rushed out of the tear, after which the sac was packed with gauze, sponged temporarily while the rent was sewed into the lower angle of the abdominal wound. The fœtus was lost in the blood clots, but its sac or nest was found at the bottom of the pelvis imbedded in the remains of the tube. Uninterrupted recovery followed.

8. July 18, 1894—Double pyosalpinx:

Patient aged about 28. had been bedfast three or four months, a part of which time she was treated for malarial fever, her real disease being overlooked.

The tubes were large, tortuous, very much thickened, and densely adhered to surrounding viscera. Uterine fundus was tightly bound down and the ovaries were buried out of sight. One of the tubes resembled a small sausage, being about four inches long and three-fourths of an inch in thickness. Only one or two ligatures seemed necessary to restrain hemorrhage, as no bleeding was observed when the tubes during enucleation

broke loose from the uterine fundus.

The pelvis was thoroughly irrigated, first with hot salicylic and boric acid solution, followed by hot sterilized water. As the water returned perfectly clear and no oozing appeared during the subsequent dressing no drainage was used.

She was put to bed with but slight shock, pulse 120. Temperature soon reached one or two degrees above normal and remained there till death, about thirty hours later. It is probable that drainage would have been followed by a different result in this case.

9. Appendicitis without operation; death; post-mortem.

Patient aged 40, a large, vigorous man, took sick March 31 last with a severe pain in umbilical region, for which morphine was given subcutaneously, and as he could not be induced to take a rectal injection, a saline cathartic was given with hot applications externally. He seemed to improve for three or four days, when he was told if he kept quiet very likely no further visit would be required, but he got out of bed and went to the closet in the yard to evacuate bowels, after which he grew very much worse and died on the tenth day of his illness. This patient was very ignorant and stubborn, and my impression is that had he maintained the horizontal position quietly he would have recovered.

Post mortem showed general suppurative peritonitis. Bowels greatly distended, paralyzed and adhered to adjacent tissues. Large amounts of pus were found free in various parts of the abdomen. The appendix was entirely sloughed away, and the bowel communicated with the pus cavity at the cæcum. A peculiarity of this case was greater pain and tenderness on the left than on the right side. This occurs in a certain proportion of cases and should be borne in mind as it may mislead, especially in the female.

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Ichthyosis Hystrix, with Report of Case.

BY J. W. NEPTUNE, M. D., CHAPMAN, KAS.

Read before the Golden Belt Medical Society at Junction City, Kas., January 3, 1895.

Ichthyosis, xeroderma, or fish-skin disease is a disease of the skin marked by the formation of white masses of epidermis which peel off like thin paper, or of green, brown or black masses firmly fixed to the skin and separated from one another by deep furrows and lines.

This disease has been frequently mentioned by the older writers. During the middle ages it was frequently noticed by physicians, and owing to its striking appearance received many fanciful names.

A celebrated case, Edward Lambert, born in Ireland in 1710, suffered from this disease in its worst form; he was the father of a family, all of whom were affected by ichthyosis.

Willan was the first author to give an accurate and comprehensive description of ichthyosis, and of late years by a more thorough use of the microscope the true nature of the disease is better understood.

I shall describe the disease principally as it appears in children. Although ichthyosis is spoken of as a congenital disease, it is seldom found in children at birth, and does not usually appear until after the age of two years.

Dr. J. E. Graham, of Toronto, Canada, reports a case in which it appeared on the third or fourth day after birth.

The parents of the patient I present to you to-day inform me that when this child was born there was a red spot about the size of the thumb nail on the outer surface of the calf of its leg about midway between its knee and ankle, and from this primary lesion has developed the case which you see. In all the literature I have on the subject I cannot find a case as truly congenital as this one.

Ichthyosis first develops in the mildest form, as did this case, and this form by some authors is called pityriasis; then it in-

creases in intensity to form the ichthyosis simplex, and in some cases goes on to the most aggravated condition, known as ichthyosis hystrix.

We shall, therefore, for the purpose of description, divide the disease into the two forms just named—ichthyosis simplex and ichthyosis hystrix.

These, however, merge into one another, and the two varieties may occur in the same patient at different periods of life.

In ichthyosis simplex there is a defective action of the sebaceous and sweat glands, and an exfoliation of the epidermis in the form of branny scales, if the scales are not removed by frequent bathing or some emollient application they accumulate and form layers of considerable thickness, the skin may then present a grayish-white glistening appearance, or it may be yellow, green or brown in color.

Ichthyosis hystrix is a more severe form of the disease, and is often found in its greatest intensity in localized patches; in this condition the scales, instead of exfoliating, are retained until a very thick layer is produced, its retention is due to its capability of being longer nourished. The masses of epidermis when fully developed present large wart-like excrescences, separated by deep furrows. As before stated, the disease appears in early childhood and then rapidly develops into that particular form in which it will continue throughout the remainder of life.

As a rule in ichthyotic patients the scalp and hair are very dry and the latter very brittle. That form of the disease which comes on in childhood and gradually develops until adult life, and then remains throughout life, must be looked upon as a congenital disease. The more localized form, according to Hebra, is frequently acquired.

Evidence of the hereditary nature of the disease is easily found. There are, however, cases where only one member of the family has been attacked, and no trace of hereditary taint discovered. It occurs in all climates and in all circumstances of life, and both sexes suffer equally.

The peculiar and well marked appearance of the skin, together with its history of extreme chronicity, renders the diagnosis of ichthyosis a comparatively easy matter. The thickening of the skin, the large scales with well marked lines separating them, the wart-like excrescences, or ridges separated by furrows which pass deep down to the corium, are very characteristic of this disease.

In a few cases the presence of a severe form of one of the exanthemata has effected a permanent cure. Hebra mentions the case of a girl in whom a severe attack of measles caused the disappearance of a previously existing ichthyosis simplex, and another in whom an attack of variola produced a permanent cure.

Internal treatment is of little avail. Cod-liver oil has been found of benefit in some cases; the other alterative remedies, such as iodide of potassium, arsenic, etc., are of no use whatever.

Some good has been stated to follow the use of linseed oil. In a few cases under observation jaborandi in moderate doses has temporarily influenced the disease favorably, probably by increasing the action of the sweat glands.

In the severe form of the affection we must depend entirely upon local treatment. We cannot hope to cure, but we can in many cases give such relief as to make life more comfortable. Oily applications, soaps and frequent bathing are the measures to be advised.

The main object of the external treatment is to soften and get rid of the epidermal masses, and at the same time make the skin more soft and pliable.

Hebra accomplished this by rubbing the patient twice a day with soft soap for from six to twelve days and placing him naked between blankets till the epidermis begins to soften and peel off; then the patient has a bath daily for one or two hours, the skin being anointed after the bath with oil or an emollient salve. By this plan, it is said, an ichthyosis can be made to disappear to a great extent, but after a longer or shorter period of time the epidermal covering will

be reproduced in its former thickness.

The following are good emollient applications:

Lanoline	℥ ij
Cold cream or oleate of bismuth	℥ vj
Glycerine or glycerine of starch aa	℥ ss
Vaseline aa	℥ ss

The same directions will apply to all of the above formulæ. They should be applied daily after a thorough bathing of the parts.

Duhring recommends the following:

℞	Glycerine	℥ j
	Vaseline	℥ ss
	Benzoated lard	℥ j

Apply daily after washing.

There is no remedy which will prevent the return of the epidermal masses; the local treatment must therefore be repeated as often as is found necessary.

The little patient before you has been treated by a number of physicians, one pronouncing the affection eczema, another tetter, another something else, but I think you will all agree with me that it is a case of ichthyosis hystrix; be that as it may, the case is an extraordinary and interesting one and the parents are very anxious for some treatment that will give her relief. On studying up the case when it first came into my hands I made up my mind I had a case of ichthyosis hystrix, and as all the authority I had on the subject said it was incurable, the little girl being in good health otherwise, and having taken a great deal of treatment for the affections diagnosed by the other physicians in whose care she had been at different times, I gave the parents my honest opinion, and told them I pronounced the disease incurable; and, as I stated before, the little girl being in good health otherwise, I did not think it advisable to put her through a vigorous course of treatment, such, for example, as recommended by Hebra. So all I gave her was an emollient application to soften and remove the epidermal masses to a certain extent; this application consisted of a very small quantity of oil of cad, with the officinal oxide of zinc ointment.

Her father tells me that at one time she took a great deal of a patented preparation of clover bloom, the result being a clearing off of the scales to a certain extent, but never entirely, and as soon as the medicine was discontinued they would begin to form again and in a short time be as bad as ever.

FOR the week ending January 19, 1895, the sanitary bureau, health department, reported 169 deaths from contagious diseases, which were as follows:

Tuberculosis	105
Typhoid fever	2
Scarlet fever	17
Cerebro-spinal meningitis	2
Measles	9
Diphtheria	33
Smallpox	1
Total	169

About 62 per cent. of the deaths from the seven contagious diseases was from tuberculosis.

THE census of 1890 shows that there are 50,411 blind persons in the United States, or 806 blind to every 1,000,000 inhabitants. In 1850 there were 422 blind to 1,000,000. This shows that blindness is on the increase in the United States.

CIRCUMCISION caused sixty-seven deaths in New York city during the past thirteen years. Evidently physicians were not in it. No one but a capable physician or surgeon should be permitted to perform this operation.

D. P. H., Doctor of Public Health, is a degree conferred by the University of Dublin, Cambridge and Edinburgh, on those who take a thorough course upon sanitary science. Medical colleges should consider this matter, for there is meat in it.

Kansas Medical Journal.

PUBLISHED WEEKLY

BY THE MEDICAL PUBLISHING COMPANY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE:

Per annum, in advance..... $1 00
Single copies..... 15 cents

Subscription may begin at any time. The safest mode of remittance is by bank check or postal money order drawn to the order of the undersigned. When neither is accessible, remittances may be made at the risk of the publishers, by forwarding in Registered Letter. Address

KANSAS MEDICAL JOURNAL,
723 Kansas Avenue.

W. E. McVEY, B.S., M.D., EDITOR.

COLLABORATORS:

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GEORGE EMERSON, M.D., Winfield, Kas.

Topeka, Kansas, Saturday, Feb. 9, 1895.

Fate.

The Senate committee to whom was referred the medical bill reported it back with the recommendation that it be *not* passed. The chairman of the committee entered a protest against the majority report.

How to Administer Chloroform.

Guerin says that "chloroform should be inhaled through the mouth and not through the nose. He says that if a rabbit is subjected to tracheotomy and then made to inhale the chloroform through the trachea that the drug has no effect on the heart. But when the chloroform is held to the rabbit's nose and inhaled, the heart stops immediately."

If such is the case with rabbits, and the effect of chloroform is the same on man, before anæsthetizing a patient the nose should be plugged and the patient made to breathe through the mouth. Dr. Guerin's suggestion is worth considering.

How Is This for a Clinic?

The surgical clinic at Christ's Hospital for the class of the Kansas Medical College for Monday, February 4, 1895, beginning at 10 A. M., was as follows:

1. Laparotomy.
2. Arthrotomy (knee joint).
3. Excision of rectum.
4. Vaginal hysterectomy.
5. Plastic operation (making a vesico-vaginal system).

ACCORDING to the *Medical Record* New York city was as much overcrowded with physicians eighty years ago as it is to-day.

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LODGE and contract practice is a source of danger to the legitimate practice of medicine.

A FIVE years' course is now required in medicine in the province of Ontario, Canada.

"YOU can rely on your patient for a statement of facts, but not for a conclusion."

A Slight Mistake.

New York Medical Record.

This is an instance where a bad cold caused a startling conversation. A modest young newspaper man was invited to a party at a residenee where the home had recently been blessed with an addition to the family. Accompanied by his best girl he met his hostess at the door, and after customary salutations asked after the baby. The lady was suffering from a severe cold, which made her slightly deaf, and she mistakenly supposed that the young man was inquiring about her cold. She replied that though she usually had one every winter this was the worst she had ever had; it kept her awake at night a good deal at first and confined her to her bed. Then noticing that the scribe was becoming pale and nervous, she said that she could see by his looks that he was going to have one just like hers and asked him if he wished to lie down. The paper came out as usual the next week, but the editor has given up inquiring about babies.

Effect of Massage on the Circulation.

The Times and Register.

Lauder Brunton and Tunnicliffe (*Journal of Phys.*, December, 1894) record the results of some careful observations on the effect of massage on the circulation. The experiments were undertaken in order to determine (1) the changes occurring in the clrculation in a given group of muscles during and after massage; (2) the effect of massage of a large muscular area on the general blood pressure. The experiments were carried out on cats, and the method used was the determination of the amount of blood passing in a given time from the efferent vein. The general results obtained are:

1. That during massage the flow of blood is increased through the muscles.

2. Immediately after the cessation of massage an accumulation of blood occurs in the massage muscules, which is followed by an increased flow through them.

3. Massage of a large muscular area causes just a slight rise of blood pressure, followed by a fall which may amount to one-fifth of the initial blood pressure. Both during and after massage of muscles a lowering of peripheral resistance in the corresponding area takes place, and hence more blood is propelled at each heart beat from arteries to veins, and a fall of arterial tension ensues. The results are carefully compared with the effects of alternate compression and release of the arteries, and also with the effects of simply firmly grasping the muscles, both of which must be factors in the general result of massage. It was found that in each of these cases a rise and fall of pressure took place, but the effect was more transient. Gentle kneading was found to have more effect in causing a fall of blood pressure than either compression and release of both external iliac arteries or of the muscles of both thighs.

Malaria Relieved by Splenic Extract.

The American Therapist.

A Frenchman, Dr. Cousin, has treated malaria successfully by the hypodermatic use of splenic acid. The extract is sterilized and filtered, and daily injections are given, beginning with fifteen minims and gradually increasing until as much as two and a half fluid drachms are administered. Usually about thirty-five days are required to effect a cure; but the plan has the disadvantage of producing abscesses. The injections give rise to increased flow of urine, more or less free perspiration, slight elevation of temperature, but on the other hand, the pain and swelling of the spleen diminish, the appetite increases as well as the strength and body weight of the patient.

The foregoing is a most important observation, since it shows the virtues of animal products in this direction, and also confirms the views put forward by the writer that the

efficacy of these products is mainly, if not wholly, due to the influence of the contained nuclein. When the medical profession has learned the great value of nuclein medication in malaria, the disease will have been robbed of its terrors, and the sale of quinine will be materially lessened. Apropos may be mentioned the fact that one of the best known and most enthusiastic investigators of malaria, living in one of the Southern States, has had the disease for twenty years and takes ten grains of quinine daily. Ordinarily, a drachm of the nuclein solution employed over a period of three weeks, five minims on alternate days, would effectually eradicate the disease. It would be necessary, however, to administer some remedy to counteract the effects of long-continued cinchonism.

Historical Case of Diphtheria.

The Record.

Shortly after Louis Bonaparte had taken up his residence in his new kingdom of Holland his eldest boy was seized with croup—most probably diphtheria—which proved fatal. Napoleon heard the news about a week before the battle of Friedland, and was so much affected by it that he at once commanded that steps should be taken to offer a prize for the best essay on croup, its origin, nature, and treatment. The prize was 12,000 francs. Eighty-three essays were received. Dr. Cabanes has recently examined some of them, and declares that even the two which divided the prize display how extraordinary was the ignorance in those days of a disease which was certainly common, and well known to be fatal. Yet there were many good clinical observers in France at that date. Two results naturally followed the action of the great conqueror. In the first place nothing new was found out about croup; secondly, all the unsuccessful candidates were indignant. The son of Constant, Napoleon's valet, died of croup shortly after the award. "Why," said the defeated essayists, "were not the recommendations of the successful writers carried out by the physicians who awarded the prize?"

Compound Tincture of Benzoin in Surgery.

American Therapist.

Dr. J. L. Garland Sherrill highly recommends compound benzoin tincture in cases of injuries about the hands, especially those by machinery. The manner of application is as follows: After careful cleansing and disinfection of wound and complete arrest of hemorrhage, a layer of absorbent cotton is placed around the wound, over which the tincture is poured until the cotton is saturated. This forms an air-tight aseptic coating after evaporation of the alcohol. This dressing is claimed to be very advantageous in the practice of the country physician, because it need not be frequently changed and can sometimes be left on for a week without inconvenience. If it becomes loose, a little more benzoin tinct. may be added by the patient.

Cranberries in Cholera.

The Southern Clinic.

Dr. Goriansky declares that the use of the pure and fresh juice of raw cranberries, given freely, either undiluted or with an equal part of water, is an excellent means of relieving the thirst and vomiting peculiar to cholera. In fifty cases in which ice and narcotics failed to make the slightest impression, the cranberry juice in small but repeated doses rapidly checked both vomiting and nausea.

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PROF. ALFRED L. LOOMIS, of New York, died of pneumonia January 23, 1895.

Cod-Liver Oil: What Is It?

BY REYNOLD W. WILCOX, M.D., LL.D., NEW YORK.

Professor of Clinical Medicine and Therapeutics at the New York Post-Graduate Medical School and Hospital.

Ever since 1841, when cod-liver oil was so strongly advocated by Bennett, it has held a prominent place in the confidence of physicians. From this date we find that many and careful studies have been made, so that we may say that its scientific use is of comparatively recent origin, although it has been employed empirically for nearly two hundred years. The chemistry of this subject is by no means, even now, complete, although many analyses have been made, so that at intervals one finds in the literature various hypotheses as to what ingredients this remedy's virtues may be attributed to. In spite of discordant theories and the contradictory results of chemical analysis, cod-liver oil is still regarded as a remedy of the highest value in diseases marked by malnutrition, of which pulmonary tuberculosis is the most frequent occasion for its employment.

What then can be said of its composition? Briefly, it is principally, first, olein glyceride (70 per cent.) with variable quantities of stearin, palmitin (nearly 25 per cent.), and myristin glycerides, the latter increasing with the darker color. So far no controversy has arisen beyond the unconfirmed statement of Winckler (1852) that glycerin could not be obtained from cod-liver oil, which he regarded as a whole, containing propyl oxide. Second, iodine, in from 0.0012 (Bird) to 0.004 per cent. (de Jongh), its presence first demonstrated by De l'Orme, but even now it is not known in what form it exists. On the other hand, several observers have failed to detect it in all specimens. Third, bromine. Fourth, phosphorus: as pre-existent phosphoric acid, 0.0789; as obtained by total oxidation of the oil, 0.1047 per cent. (de Jongh.) Fifth, sulphur. Sixth, biliary acids. Seventh, free acids, calculated as acetic acid, 0.01 to 1.80 per cent. (Charles, 1882), and regarded as butyric and acetic acids by de Jongh (1849). It is quite likely that free oleic, palmitic and stearic acids exist in the oil. Eighth, gaduin, $C_{35}H_{46}O_9$, identical with morrhuic acid (Gautier and Mourgues, 1888), existing as an unstable compound resembling lecithin, and in contact with acids and alkalies decomposing into morrhuic acid, $C_9H_{13}NO_3$, phosphoric acid and glycerin. Ninth, gadic acid (Luck, 1857), deposited from light brown oil.

Under the name of morrhuolins are included the so-called alkaloids of cod-liver oil; morrhuic acid mentioned above; dihydrolutidin, $C_7A_{11}N$; asellin, $C_{25}H_{32}N_4$; amylamin, $C_5H_{13}N$; oxycollidin, $C_8H_{11}NO$; morrhuin, $C_9H_{27}N_3$; nicomorrhuin, $C_{20}H_{28}N_4$; the last four being the most active. Gautier and Mourgues found, however, in yellow oils six definite bases: butylamin, amylamin, hexylamin, dihydrolutidin, asellin, morrhuin and morrhuic acid. It will be observed that they failed to find oxycollidin and nicomorrhuin. So far as the oily constituents, iodine, bromine, sulphur, phosphorus, biliary substances and free acids are concerned, there is virtual agreement in the results of analyses.

As to the so-called alkaloids, or definite bases, there is abundant opportunity for criticism. It is remarkable that they are most abundant in the brown oils, and from these is commercially obtained morrhuol, the name applied to an alcoholic extractive derivable from cod-liver oil and of probably indefinite chemical structure. Similarly the term "gaduol" has been employed. Presumably morrhuol, which according to Lafarge (1885) is a very aromatic substance of a sharp, bitter taste found in brown oils 4.50 to 6, yellow oils 2.50 to 3, and in white oils 1.50 to 2 per cent., contains most of the so-called alkaloids, together with the iodine, bromine, and phosphorus, and is the substance which is supposed to represent the active principles of the oil.

The physiological properties of the seven alkaloids have been determined by Gautier and Mourgues to be as follows:

Butylamin: In sufficient doses this produces in animals fatigue, stupor, vomiting, and a certain degree of paresis. In small doses it excites the urinary secretions; in

large doses it is at the same time convulsive and paralyzing; in medium doses it throws the animals into a sort of somnolence, with muscular peresis, but with complete conservation of the intelligence. Although poisonous, it does not produce death unless given in very large doses.

Amylamin: This is a very active base. In small doses it excites the reflexes and the urinary secretion. In large doses it provokes convulsive trembling, then regular convulsions and death.

Hexylamin acts almost like amylamin, but with less intensity.

Dihydrolutidin is a rather toxic base, even in small doses, when it produces a notable diminution of sensibility. In larger doses it provokes trembling and convulsions in the muscles of the face. With still larger doses in a guinea pig the trembling increases and becomes more general. Very lively periods of excitation are followed by profound depression with insensibility and paralysis of the muscles, especially of the posterior members. The animal gradually goes into an asphyxiated collapse.

Asellin is only a feebly active base. In sufficient dose it produces dyspnœa, stupor, convulsive troubles, and in large doses death.

Morrhuin is one of the most active principles of the oil; It is also in larger quantity —a little more than one-third of the total alkaloids. This is believed to be a powerful stimulant to the functions of nutrition and assimilation, producing a rapid circulation of the extractive residues of cell life towards the blood and kidneys. where they are eliminated, and in this way provoking indirectly a powerful movement of the assimilation. Virtually it is believed to increase the appetite and to provoke diaphoresis and diuresis.

As we read the results of these experiments, we cannot but be impressed by the fact that these symptoms are the symptoms of ptomaine poisoning. And when one remembers that the process of manufacturing hitherto employed is such that putrefaction is an important factor in the production of the oil, as any one will testify who has visited the North Cape, where the stench encountered upon the journey is as prevalent and as repulsive as that found near the menhaden rendering works of the Atlantic coast, the impression becomes a certainty. Without doubt, the alkaloids contained in morrhuol are putrefactive or cadaveric alkaloids, and of these amylamin, asellin, dihydrolutidin are assuredly poisonous and are so classified in Gould's table as modified from Vaughan and Novy. Amylamin can also be obtained from horn and from putrid yeast. Morrhuin, as is stated above, is probably diuretic and diaphoretic. Butylamin may or may not be toxic; it is quite probably the latter. That any of these alkaloids are present in cod-liver oil when prepared at the place of the fisheries, by a proper process, is extremely doubtful. So far as I can learn, no analyses have been made of such cod-liver oil. To assume that morrhuol represents in any way the active therapeutic properties of cod-liver oil, is to assume that cod-liver oil is useful only in the proportion that it is putrefied. My attention having been called to the reports of Lafarge (1885) and later of Germain See, I experimented with morrhuol for several months, and finally, convinced of its absolute failure, I abandoned its use. I was so thoroughly positive of its uselessness that the paper of Bouillot did not induce me to repeat my observations. If there are any medical properties in the preparations of the so-called active principles from which oil is removed, or which are removed from the oil, they must be entirely due to the other substances with which they are incorporated. The substitution of active principles in place of crude drugs is praiseworthy, when it is proved that these active principles represent the properties of the drug or possess in themselves definite physiological action. No digitalin, nor digitonin, nor digitoxin, has yet been isolated which fully represents digitalis; why then need we expect that alkaloids shall represent cod-liver oil, even if they arise from its putrefaction?

To what then can we attribute the beneficial action of cod-liver oil in wasting diseases? That cod-liver oil is a food, a food of especial value, because of its peculiar

properties.

To quote Farquharson: "It has been proved by experiment that animal are more digestible than vegetable oils, and cod-liver oil is the most readily assimilated of all. After being emulsified by the pancreatic juice, it comes in contact with the bile, which distinctly increases its power in passing through moist animal membrane; and it is probable also that the biliary principles incorporated in its own structure aid in enabling it to be easily absorbed by the lacteals. Its action in the system is to improve the general constitutional tone, to evolve force and heat, and to aid in supplying those fatty elements which are so essentially requisite for the construction and repair of the tissues. It supplies the fatty matter on which the proper functions of cell growth and development depend, the nuclei in the cells being formed of fat."

The free fatty acids contained also aid in emulsification and absorption from the alimentary canal. It improves the nutrition and supplies the fatty ingredients necessary for the growth and repair of the nervous system. It improves the quality of the blood, increasing the number of the red corpuscles, and strengthens the heart muscle. Although the quantity of iodine, bromine and phosphorus is small, so far as their influence goes they are of use. Brunton has pointed out that, because it nourishes the young epithelial cells of the bronchial mucous membrane, enabling them to grow instead of being converted into pus, it is of undoubted efficacy as an expectorant. Thousands of lives would undoubtedly have been saved, had the profession understood that beef tea, as formerly made, containing scarcely more than the soluble extractives, possesses about as much value as a nutrient as urine.

Shall we now go on to administer the extractives of cod-liver oil, cadaveric alkaloids of demonstrated poisonous properties—of which the best that can be said is that one is diaphoretic and diuretic in its action and increases the appetite—and discard the really valuable constituents, which make up the food? A tuberculous patient can generate a sufficient amount of ptomaine without any assistance from the physician. It is the prevention of the formation, not elimination, that one seeks in treatment. An analogous procedure would be the administration of beef tea made from putrid meat.

The use of the extractives of cod-liver oil is no new idea. In 1866, an extract, an evaporated watery extract, made from the livers in preparing the oil, was used. It soon fell into disuse. Granting that the ptomaines of putrid oil are harmless—which is as yet by no means proven, for the quantity in which they have been administered has been too small for any definite conclusion—if there are any remedial properties in the extracts or wines it must be in the substances incorporated with them, but which are better administered separately.

How then shall we prescribe cod-liver oil? By emulsions, which are heavily charged with mucilage and contain water which favors rancidity? Of all which I have used—and every one which I could obtain has been used in my hospital and dispensary service—but one has been satisfactory, and that only when freshly made. For fourteen years I have used an oil of which the only recommendation it claimed was that it was obtained from fresh livers by cold expression. It was of American origin, and on that account was not obtained from the cod when in as good condition as when off the shores of Norway. As it was, its use was far more satisfactory than that of emulsions or mixtures of whatever sort.

During the past few months I have used with great satisfaction the Improved Lofoton Cod-liver Oil made by Parke, Davis & Company, which is simply an oil obtained on the site of the fisheries from the livers of the fish at the time they are taken from the water. The process of manufacture is carefully carried out so that absolute cleanliness and freshness of the material shall be secured and that no decomposition shall take place. The disagreeable odor and flavor is removed, but no constituent important for its use as a food is taken out. Specimens kept for months have as yet shown no change. The problem seems to be solved.

A food to be of its highest usefulness must be palatable; the most weighty objection is now done away with.

The oil should be given during the height of pancreatic digestion, one to two hours after eating, so that it may pass rapidly through the stomach and be absorbed during intestinal digestion. The stools should be watched that more shall not be administered than can be absorbed. If the oil should "repeat," a fact which I have not as yet observed, a few drops of ether added to the dose is likely to obviate that difficulty. The dose is from one to six teaspoonsful. My conclusions are:

1. Cod-liver oil is a food, important because of its peculiar properties.

2. Since it is a food, no extractive can represent its value.

3. The purer the oil—the more free from cadaveric alkaloids—the more palatable will it be and the better adapted for its purpose.

4. The best that can be said of the cadaveric alkaloids is that they may possibly represent its eliminative, they certainly do not represent its reconstructive, properties.

5. It is not proven that the administration of appreciable quantities of the cadaveric alkaloids is devoid of danger.

"Ambrosia Orientalis."

The therapeutical value of this extract as a powerful nerve and brain tonic, and powerful stimulant of the reproductive organs in both sexes cannot be over-estimated. It is not an irritant to the organs of generation, but a recuperator and supporter, and has been known to the native priests of India, Burmah and Ceylon for ages, and has been a harem secret in all the countries where the Islam has planted the standard of polygamy.

Among those cognizant with its value in India and the East, it is taken continually (as herbs and seasonings), especially at moments of failing sexual power or mental disability caused by excesses.

Its continual use is known to ward off senile decay and impotency to a great age.

In the Oriental Pill the profession have a formula designed with special reference to the glands of the reproductive organs, which will increase their activity and promote their secretive powers.

℞ Ambrosia Orientalis.....Grs. 2
Extract Saw Palmetto.....Gr. ¼
Zinc Phosphide.....Gr. ⅛
Strychnos Ignatii.....Cr. ⅛
with Capsicum and Aromatic Powder.

Indications.—Impotency (functional and congenital), spermatorrhea, sexual debility, weakness of the bladder, testes, mammæ, or ovaries. Prostatities—valuable as a diuretic.

Russia's Empress Gains Strength.

The Court Journal, London, January 12, 1895.

The producers of "Mariana Wine" (Vin Mariani) should, according to report, soon have a splendid market in Russia for their nerve and brain tonic, as the Dowager Empress has, at the suggestion of the Princess of Wales, drunk it since the death of her consort, with the most remarkable and beneficial results. It seems that Her Majesty is one of the many delicate persons with whom stimulating drugs like quinine, iron and Peruvian bark disagree, but such is not the case with the wine tonic referred to. It is well known that the Princess of Wales also derived increased strength of brain and nerves from it during her last great trials. Moreover, in consequence of the benefits obtained by the Empress, a great demand for this tonic has sprung up among ladies of Russian aristocracy suffering from "nerves."

WHY are athletes more liable to typhoid fever as a class than others?

A PHYSICIAN should be aggressive, but not obtrusive.